

AMENDMENTS TO THE CLAIM

1-4. (Cancelled)

5. (New) A transgenic rat whose genome comprises a transgene encoding mutant CHRNA4 having the amino acid sequence of SEQ ID NO:3 in which the 286th Ser is substituted by Leu and is operably linked to a promoter and expressed in the brain of the transgenic rat, wherein the transgenic rat is established by a normal ontogenesis and develops a spontaneous epileptic seizure during sleep.

6. (New) The transgenic rat of claim 5, wherein the mutant transgene CHRNA4 has the nucleotide sequence of SEQ ID NO:2 in which the 865th t is substituted by c, and the 866th c is substituted by t.